## CLAIMS

1. Oxidizing composition for dyeing, bleaching or permanently reshaping keratin fibres, comprising at least one oxidizing agent and at least one compound corresponding to the general formula (I) below:

 $R-(CHOH)_4-CO_2X$  (I)

10 in which:

- R represents a group CH2OH or CO2X, and
- X represents a hydrogen atom or a monovalent or divalent cation derived from an alkali metal, from an alkaline-earth metal, from a transition metal or from an organic amine, or an ammonium cation:
- with the proviso that, when R represents  $CH_2OH$ , the compound (I) is other than gluconic acid and the salts thereof.

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- 2. Composition according to Claim 1, in which the monovalent or divalent metal cation is chosen from the group consisting of monovalent alkali metal cations, divalent alkaline-earth metal cations, divalent transition metal cations and monovalent cations derived from organic amines or from ammonium.
- 3. Composition according to either of Claims 1 and 2, in which the compound(s) of formula (I) is(are) chosen from the group consisting of mannonic acid, altronic acid, idonic acid, galactonic acid, talonic acid, gulonic acid and allonic acid.

- 4. Composition according to Claim 1, in which, for the compound of formula (I), R represents a group  $CO_2X$ .
- 5. Composition according to Claim 4, in which the compound(s) of formula (I) is(are) chosen from the group consisting of mucic acid, glucaric acid, mannaric acid, altaric acid, idaric acid, talaric acid, gularic acid and allaric acid, the alkali metal salts thereof, the alkaline-earth metal salts thereof, the transition metal salts thereof, the organic amine salts thereof and the ammonium salts thereof, and mixtures thereof.
- 6. Composition according to Claim 5, in which the compound of formula (I) is mucic acid.
- 7. Composition according to any one of the preceding claims, in which the compound(s) of formula 20 (I) represent(s) from 0.001% to 10% by weight relative to the total weight of the oxidizing composition.
- 8. Composition according to any one of the preceding claims, in which the compound(s) of formula (I) represent(s) from 0.001% to 5% by weight relative to the total weight of the oxidizing composition.
- 9. Composition according to any one of the preceding claims, in which the oxidizing composition comprises one or more oxidizing agents chosen from the group consisting of hydrogen peroxide, urea peroxide, alkali metal bromates, persalts such as perborates, percarbonates and persulphates, and peracids.

10. Composition according to any one of the preceding claims, in which the oxidizing agent(s) represent(s) from 0.1% to 30% by weight relative to the total weight of the oxidizing composition.

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11. Composition according to any one of the preceding claims, in which the oxidizing agent(s) represent(s) from 0.5% to 20% by weight relative to the total weight of the oxidizing composition.

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- 12. Composition according to any one of the preceding claims, also comprising one or more cationic or amphoteric conditioning polymers, in proportions of from 0.01% to 10% by weight and preferably from 0.05% to 5% by weight relative to the total weight of said composition.
- 13. Composition according to any one of the preceding claims, also comprising one or more nonionic, anionic, cationic or amphoteric amphiphilic polymers, comprising a hydrophobic chain, in proportions of from 0.05% to 20% by weight and preferably from 0.1% to 10% by weight relative to the total weight of said composition.

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- 14. Composition according to any one of the preceding claims, also comprising one or more surfactants, in proportions of from 0.01% to 40% by weight and preferably from 0.1% to 30% by weight relative to the total weight of said composition.
- 15. Composition according to any one of the preceding claims, also comprising one or more rheology modifiers other than the nonionic, anionic, cationic or amphoteric amphiphilic polymers, comprising a

hydrophobic chain, in proportions of from 0.05% to 20% by weight and preferably from 0.1% to 10% by weight relative to the total weight of said composition.

16. Composition according to any one of the preceding claims, also comprising one or more acidifying or basifying agents, in proportions of from 0.01% to 30% by weight relative to the total weight of said composition.

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- 17. Composition according to any one of the preceding claims, also comprising one or more solvents chosen from the group consisting of water and mixtures composed of water and of one or more cosmetically acceptable organic solvents, this or these solvent(s) representing from 0.5% to 20% by weight and preferably from 2% to 10% by weight relative to the total weight of said composition.
- 20 18. Composition according to any one of the preceding claims, also comprising one or more adjuvants chosen from the group consisting of mineral or organic fillers, binders, lubricants, antifoams, silicones, dyes, matting agents, preserving agents and fragrances.

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19. Composition according to any one of the preceding claims, said composition being intended for bleaching or permanently reshaping human keratin fibres and preferably the hair.

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20. Process for bleaching or permanently reshaping keratin fibres, successively comprising the steps consisting in:

- a) applying to the keratin fibres an oxidizing composition as defined in any one of Claims 1 to 19;
- b) leaving the oxidizing composition to 5 stand on the keratin fibres for a time that is sufficient to obtain the desired bleaching or permanent reshaping;
  - c) rinsing the keratin fibres to remove the oxidizing composition therefrom;
- d) optionally washing the keratin fibres one or more times, rinsing them after each wash, and optionally drying them;

said process also comprising, before step a), in the case of a permanent reshaping, the steps consisting in:

- i) applying a reducing composition to the keratin fibres, said keratin fibres being placed under mechanical tension before, during or after said application;
- ii) leaving the reducing composition to 20 stand on the keratin fibres for a time that is sufficient to obtain the desired reshaping; and
  - iii) optionally rinsing the keratin fibres
    with water to remove the reducing composition
    therefrom.

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- 21. Process for dyeing keratin fibres, successively comprising the steps consisting in:
- e) applying a dye composition to these fibres;
- f) developing the colour of said composition by applying to the fibres an oxidizing composition as defined in any one of Claims 1 to 19;
  - g) leaving the oxidizing composition to stand on the keratin fibres for a time that is sufficient to obtain the desired coloration;

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- h) rinsing the keratin fibres with water to remove the dye composition and the oxidizing composition therefrom.
- 5 22. Process for dyeing keratin fibres, successively comprising the steps consisting in:
  - i) applying to these fibres a composition obtained by extemporaneous mixing, before application, of a dye composition and of an oxidizing composition as defined in any one of Claims 1 to 19;
  - j) leaving the composition to stand on the keratin fibres for a time that is sufficient to obtain the desired coloration;
- k) rinsing the keratin fibres with water toremove the composition therefrom.
  - 23. Device or "kit" for dyeing keratin fibres, comprising at least two compositions A and B intended to be mixed together to obtain a ready-to-use dye composition, the composition A being the oxidizing composition and the composition B being a composition comprising at least one dye, said device being characterized in that the composition A contains at least one or more compounds corresponding to the general formula (I) below:

$$R-(CHOH)_4-CO_2X$$
 (I)

in which:

- R represents a group CH₂OH or CO₂X, and
- X represents a hydrogen atom or a monovalent or divalent cation derived from an alkali metal, from an alkaline-earth metal, from a transition metal or from an organic amine, or an ammonium cation;

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• with the proviso that, when R represents CH2OH, the compound (I) is other than gluconic acid and the salts thereof.

24. Device or "kit" for bleaching keratin fibres, comprising at least two compositions C and D intended to be mixed together to obtain a ready-to-use oxidizing composition, said device being characterized in that at least one of the compositions C and D contains one or more oxidizing agents and at least one 10 contains one or more compounds corresponding to the general formula (I) below:

$$R - (CHOH)_4 - CO_2X \tag{I}$$

15 in which:

- R represents a group CH2OH or CO2x, and
- X represents a hydrogen atom or a monovalent or divalent cation derived from an alkali metal, from an alkaline-earth metal, from a transition metal or from an organic amine, or an ammonium cation;
- with the proviso that, when R represents CH2OH, the compound (I) is other than gluconic acid and the salts thereof.

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"kit" for 25. Device or permanently keratin fibres, comprising at least reshaping compositions E and F, composition E being an oxidizing composition and composition F being composition, said device being characterized in that composition E contains one or more oxidizing agents and at least one or more compounds corresponding to the general formula (I) below:

$$R-(CHOH)_4-CO_2X$$
 (I)

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## in which:

- R represents a group CH2OH or CH2X, and;
- X represents a hydrogen atom or a monovalent or divalent cation derived from an alkali metal, from an alkaline-earth metal, from a transition metal or from an organic amine, or an ammonium cation;
- with the proviso that, when R represents  $CH_2OH$ , the compound (I) is other than gluconic acid and the salts thereof.
- 26. Use of a composition according to any one of Claims 1 to 19, or of a process as defined in one of Claims 20 to 22 or of a device as defined in Claim 23, Claim 24 and Claim 25, for dyeing, bleaching or permanently reshaping human keratin fibres and, more especially, the hair.